SENSITIVITY 4.36 TIMES GREATER THAN CONVENTIONAL GEOPHONES

SMALL SIZE, HIGH OUTPUT

PRODUCT DESCRIPTION

The patented GS-ONE single-element geophone is designed to be comparable to the output sensitivity of a parallel series 3×2 or a 6×1 element array, exhibiting reduced cost and weight with equal vibration monitoring capabilities.

FEATURE HIGHLIGHTS

- Orientation: Vertical and horizontal available
- Moving Mass: 14g (0.49 ounces)
- Maximum coil excursion p-p: Less than 4.06mm (0.16 inches)
- Diameter is 30.5 mm (1.2 inches)
- Height less terminals is 40.7 mm (1.6 inches)
- Weight is 130.00g (4.60 ounces)
- Operation and Storage Temperature Range -40 to 100°C
- Operation and Storage Temperature Range -40 to 212°F

GS-ONE 10 HZ

Vertical

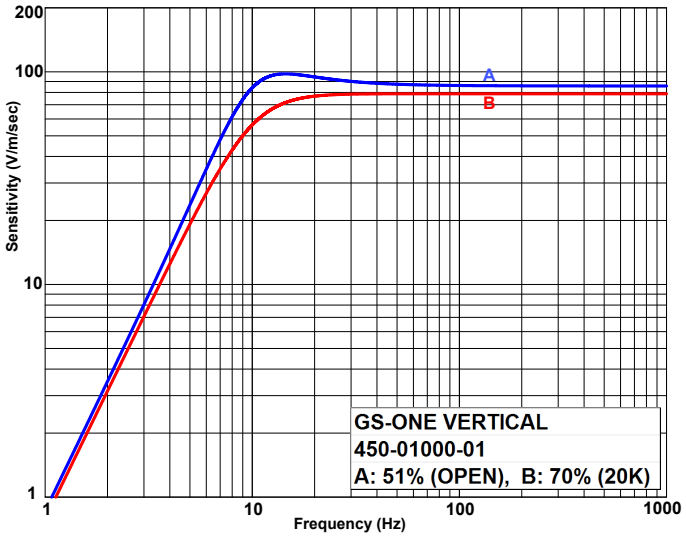
MECHANICAL SPECIFICATIONS

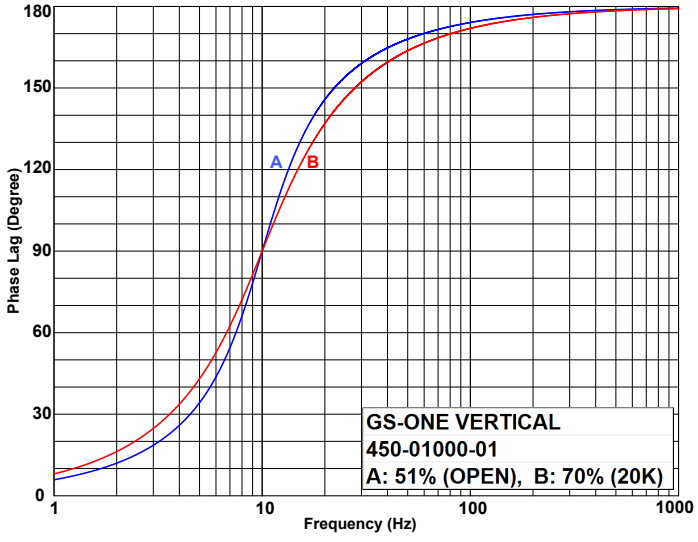
Moving Mass	14 g	0.49 oz
Maximum coil excursion p-p	4.06 mm	0.16 in.
Diameter	30.5 mm	1.2 in.
Height	40.7 mm	1.6 in.
Weight	130 g	4.60 oz
Operating and Storage Temperature Range	–40°C to +100°C	–40°F to +212°F

ELECTRICAL SPECIFICATIONS

All parameters are specified at 25°C in the vertical position unless otherwise stated.

Open-circuit sensitivity	2.18 V/in/s (85.8 V/m/s) +5%, –3.5%
Frequency	10 Hz ±3.5%
Spurious frequency	> 240 Hz
Distortion from vertical to 10° tilt	<0.15% measured at 12 Hz with 0.7 in/s p-p
Distortion at vertical	0.05% Typical
Open-circuit damping	0.48 to 0.54
Coil resistance	1800 Ω ±5%
Sensitivity with 20 kΩ load	2.00 V/in/s (78.7 V/m/s) Typical
Damping with 20 kΩ load	0.70 Typical
Tilt angle when coil hit end stop	70° Typical





GS-ONE 10 HZ

Horizontal

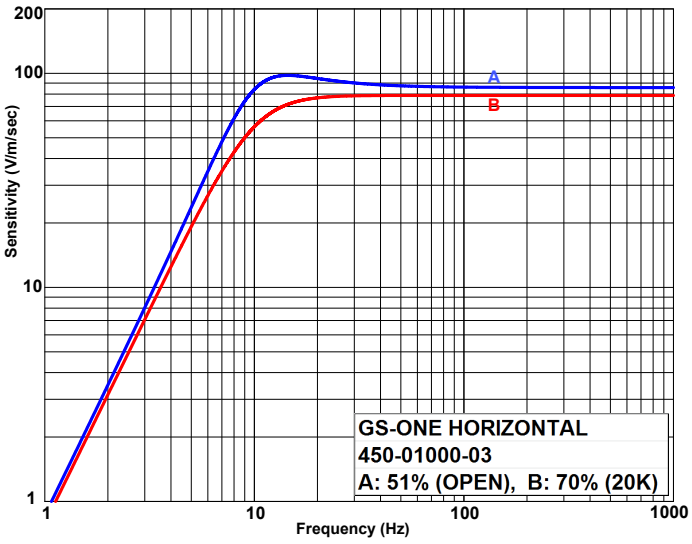
MECHANICAL SPECIFICATIONS

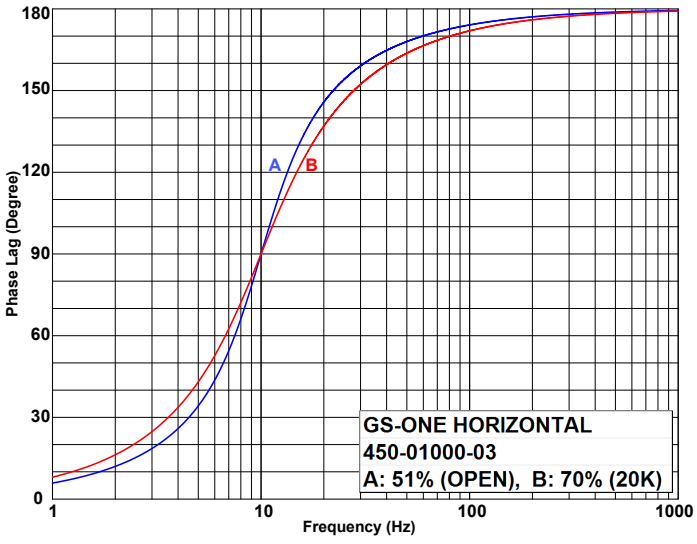
Moving Mass	14 g	0.49 oz
Maximum coil excursion p-p	4.06 mm	0.16 in.
Diameter	30.5 mm	1.2 in.
Height	40.7 mm	1.6 in.
Weight	130 g	4.60 oz
Operating and Storage Temperature Range	–40°C to +100°C	–40°F to +212°F

ELECTRICAL SPECIFICATIONS

All parameters are specified at 25°C in the horizontal position unless otherwise stated.

Open-circuit sensitivity	2.18 V/in/s (85.8 V/m/s) +5%, –3.5%
Frequency	10 Hz ±3.5%
Spurious frequency	> 240 Hz
Distortion from horizontal to ± 3° tilt	<0.15% measured at 12 Hz with 0.7 in/s p-p
Distortion at horizontal	0.05% Typical
Open-circuit damping	0.48 to 0.54
Coil resistance	1800 Ω ±5%
Sensitivity with 20 kΩ load	2.00 V/in/s (78.7 V/m/s) Typical
Damping with 20 kΩ load	0.70 Typical
Tilt angle when coil hit end stop	40° Typical





GS-ONE GEOPHONE

GEOSPACE™

OMNI

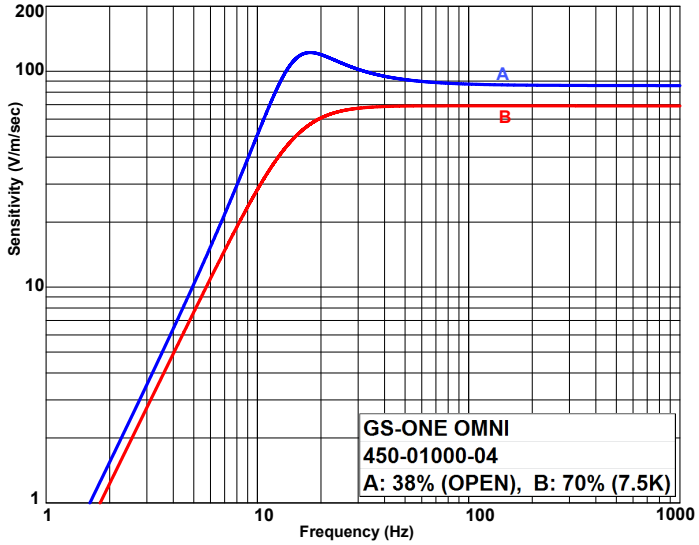
MECHANICAL SPECIFICATIONS

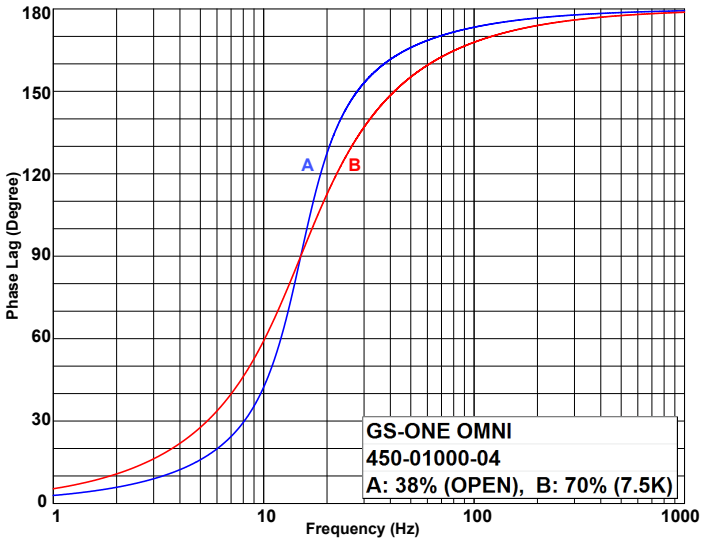
Moving Mass	13.2 g	0.466 oz
Maximum coil excursion p-p	4.06 mm	0.16 in.
Minimum coil excursion p-p	1.02 mm	0.04 in.
Diameter	30.5 mm	1.2 in.
Height	40.7 mm	1.6 in.
Weight	130 g	4.60 oz
Operating and Storage Temperature Range	–40°C to +100°C	–40°F to +212°F

ELECTRICAL SPECIFICATIONS

All parameters are specified with 7.5 kΩ load at 25°C in all tilt positions unless otherwise stated.

Sensitivity	1.75 V/in/s (69.2 V/m/s) +5%, –10%
Frequency	15 Hz +10%, –5%
Spurious frequency	>160 Hz
Distortion at all tilt angles	<0.2% measured at 15 Hz with 0.2 in/s p-p
Distortion at horizontal	0.05% Typical
Damping	0.7 ±10%
Resistance with 7.5 kΩ load	1450 Ω ±5%





SOLUTIONS FOR A SMARTER FUTURE

Specifications subject to change at sole discretion of Geospace Technologies.

U.S. Patent 8,098,546